

Serial Number: 09/165,546A**ENTERED**

1644 #181/2

Changed a file from non-ASCII to ASCII

Changed the margins in cases where the sequence text was "wrapped" down to the next line.

Edited a format error in the Current Application Data section, specifically:

Edited the Current Application Data section with the actual current number. The number inputted by the applicant was the prior application data; or other _____

Added the mandatory heading and subheadings for "Current Application Data".

Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.

Changed the spelling of a mandatory field (the headings or subheadings), specifically:

Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were:

Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.

Inserted colons after headings/subheadings. Headings edited included:

Deleted extra, invalid, headings used by an applicant, specifically:

Deleted: non-ASCII "garbage" at the beginning/end of files; secretary initials/filename at end of file;
 page numbers throughout text; other invalid text, such as _____

Inserted mandatory headings, specifically: _____

Corrected an obvious error in the response, specifically:
Seq 3 - corrected (B) type: response; corrected PRIOR APP DATA: responses

Edited identifiers where upper case is used but lower case is required, or vice versa.

Corrected an error in the Number of Sequences field, specifically:

A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.

Deleted ending stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: _____

Other: corrected spelling of inventor name

RAW SEQUENCE LISTING DATE: 05/04/2001
PATENT APPLICATION: US/09/165,546A TIME: 17:31:26

Input Set : A:\Pto.amc
Output Set: N:\CRF3\05042001\I165546A.raw

SEQUENCE LISTING

53

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/165,546A

DATE: 05/04/2001

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Input Set : A:\Pto.amc

Output Set: N:\CRF3\05042001\I165546A.raw

64	ATG CAG GCC GAA GGC CGG GGC ACA GGG GGT TCG ACG GGC GAT GCT	98
65	Met Gln Ala Glu Gly Arg Gly Thr Gly Ser Thr Gly Asp Ala	
66	5 10 15	
68	GAT GGC CCA GGA GGC CCT GGC ATT CCT GAT GGC CCA GGG GGC AAT	143
69	Asp Gly Pro Gly Pro Gly Ile Pro Asp Gly Pro Gly Gly Asn	
70	20 25 30	
72	GCT GGC GGC CCA GGA GAG GCG GGT GCC ACG GGC GGC AGA GGT CCC	188
W--> 73	Ala Gly Pro Gly Glu Ala Gly Ala Thr Gly Gly Arg Aly Pro	
74	35 40 45	
76	CGG GGC GCA GGG GCA GCA AGG GCC TCG GGG CCG GGA GGA GGC GCC	233
77	Arg Gly Ala Gly Ala Ala Arg Ala Ser Gly Pro Gly Gly Gly Ala	
78	50 55 60	
80	CCG CGG GGT CCG CAT GGC GGC GCG GCT TCA GGG CTG AAT GGA TGC	278
81	Pro Arg Gly Pro His Gly Gly Ala Ala Ser Gly Leu Asn Gly Cys	
82	65 70 75	
84	TGC AGA TGC GGG GCC AGG GGG CCG GAG AGC CGC CTG CTT GAG TTC	323
85	Cys Arg Cys Gly Ala Arg Gly Pro Glu Ser Arg Leu Leu Glu Phe	
86	80 85 90	
88	TAC CTC GCC ATG CCT TTC GCG ACA CCC ATG GAA GCA GAG CTG GCC	368
89	Tyr Leu Ala Met Pro Phe Ala Thr Pro Met Glu Ala Glu Leu Ala	
90	95 100 105	
92	CGC AGG AGC CTG GCC CAG GAT GCC CCA CCG CTT CCC GTG CCA GGG	413
93	Arg Arg Ser Leu Ala Gln Asp Ala Pro Pro Leu Pro Val Pro Gly	
94	110 115 120	
96	GTG CTT CTG AAG GAG TTC ACT GTG TCC GGC AAC ATA CTG ACT ATC	458
97	Val Leu Leu Lys Glu Phe Thr Val Ser Gly Asn Ile Leu Thr Ile	
98	125 130 135	
100	CGA CTG ACT GCT GCA GAC CAC CGC CAA CTG CAG CTC TCC ATC AGC	503
101	Arg Leu Thr Ala Ala Asp His Arg Gln Leu Gln Leu Ser Ile Ser	
102	140 145 150	
104	TCC TGT CTC CAG CAG CTT TCC CTG TTG ATG TGG ATC ACG CAG TGC	548
105	Ser Cys Leu Gln Gln Leu Ser Leu Leu Met Trp Ile Thr Gln Cys	
106	155 160 165	
108	TTT CTG CCC GTG TTT TTG GCT CAG CCT CCC TCA GGG CAG AGG CGC	593
109	Phe Leu Pro Val Phe Leu Ala Gln Pro Pro Ser Gly Gln Arg Arg	
110	170 175 180	
112	TAA GCCCAGCCTG GCGCCCCCTTC CTAGGTCAATG CCTCCCTCCCC TAGGGAATGG	646
113	TCCCAGCACG AGTGGCCAGT TCATTGTGGG GGCCTGATTG TTTGTCCCTG GAGGAGGACG	706
114	GCTTACATGT TTGTTCTGT AGAAAATAAA ACTGAGCTAC GAAAAAA	752
118	(2) INFORMATION FOR SEQ ID NO: 2:	
119	(i) SEQUENCE CHARACTERISTICS:	
120	(A) LENGTH: 31 base pairs	
121	(B) TYPE: nucleic acid	
122	(C) STRANDEDNESS: single	
123	(D) TOPOLOGY: linear	
124	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:	
126	CACACAGGAT CCATGGATGC TGCAAGATGCG G	31
130	(2) INFORMATION FOR SEQ ID NO: 3:	
131	(i) SEQUENCE CHARACTERISTICS:	

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132      (A) LENGTH: 32 base pairs
133      (B) TYPE: nucleic acid
134      (C) STRANDEDNESS: single
135      (D) TOPOLOGY: linear
136      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
138 CACACAAAGC TTGGCTTAGC GCCTCTGCC TG          32
142 (2) INFORMATION FOR SEQ ID NO: 4:
143     (i) SEQUENCE CHARACTERISTICS:
144         (A) LENGTH: 11 amino acids
145         (B) TYPE: amino acid
146         (D) TOPOLOGY: linear
147     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
149 Ser Leu Leu Met Trp Ile Thr Gln Cys Phe Leu
150           5           10
154 (2) INFORMATION FOR SEQ ID NO: 5:
155     (i) SEQUENCE CHARACTERISTICS:
156         (A) LENGTH: 9 amino acids
157         (B) TYPE: amino acid
158         (D) TOPOLOGY: linear
159     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
161 Ser Leu Leu Met Trp Ile Thr Gln Cys
162           5
164 (2) INFORMATION FOR SEQ ID NO: 6:
165     (i) SEQUENCE CHARACTERISTICS:
166         (A) LENGTH: 9 amino acids
167         (B) TYPE: amino acid
168         (D) TOPOLOGY: linear
169     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
171 Gln Leu Ser Leu Leu Met Trp Ile Thr
172           5
174 (2) INFORMATION FOR SEQ ID NO: 7:
175     (i) SEQUENCE CHARACTERISTICS:
176         (A) LENGTH: 10 amino acids
177         (B) TYPE: amino acid
178         (D) TOPOLOGY: linear
179     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
182 Leu Leu Met Trp Ile Thr Gln Cys Phe Leu
183           5           10
187 (2) INFORMATION FOR SEQ ID NO: 8:
C--> 188     (i) SEQUENCE CHARACTERISTICS:
189         (A) LENGTH: 18 amino acids
190         (B) TYPE: amino acid
191         (D) TOPOLOGY: linear
192     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
194 Ala Ala Asp His Arg Gln Leu Gln Leu Ser Ile Ser Ser Cys Leu Gln
195           5           10           15
197 Gln Leu
199 (2) INFORMATION FOR SEQ ID NO: 9:
200     (i) SEQUENCE CHARACTERISTICS:
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RAW SEQUENCE LISTING
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Input Set : A:\Pto.amc
Output Set: N:\CRF3\05042001\I165546A.raw

201 (A) LENGTH: 18 amino acids
202 (B) TYPE: amino acid
203 (D) TOPOLOGY: linear
204 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:
206 Val Leu Leu Lys Glu Phe Thr Val Ser Gly Asn Ile Leu Thr Ile Arg
207 5 10 15
209 Leu Thr
211 (2) INFORMATION FOR SEQ ID NO: 10:
212 (i) SEQUENCE CHARACTERISTICS:
213 (A) LENGTH: 18 amino acids
214 (B) TYPE: amino acid
215 (D) TOPOLOGY: linear
216 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:
218 Pro Leu Pro Val Pro Gly Val Leu Leu Lys Glu Phe Thr Val Ser Gly
219 5 10 15
221 Asn Ile
223 (2) INFORMATION FOR SEQ ID NO: 11:
224 (i) SEQUENCE CHARACTERISTICS:
225 (A) LENGTH: 18 amino acids
226 (B) TYPE: amino acid
227 (D) TOPOLOGY: linear
228 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:
230 Gly Ala Ala Ser Gly Leu Asn Gly Cys Cys Arg Cys Gly Ala Arg Gly
231 5 10 15
233 Pro Glu
236 (2) INFORMATION FOR SEQ ID NO: 12:
237 (i) SEQUENCE CHARACTERISTICS:
238 (A) LENGTH: 18 amino acids
239 (B) TYPE: amino acid
240 (D) TOPOLOGY: linear
241 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:
243 Ser Arg Leu Leu Glu Phe Tyr Leu Ala Met Pro Phe Ala Thr Pro Met
244 5 10 15
246 Glu Ala
249 (2) INFORMATION FOR SEQ ID NO: 13:
250 (i) SEQUENCE CHARACTERISTICS:
251 (A) LENGTH: 18 amino acids
252 (B) TYPE: amino acid
253 (D) TOPOLOGY: linear
254 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:
256 Thr Val Ser Gly Asn Ile Leu Thr Ile Arg Leu Thr Ala Ala Asp His
257 5 10 15
259 Arg Gln
266 (2) INFORMATION FOR SEQ ID NO: 14:
267 (i) SEQUENCE CHARACTERISTICS:
268 (A) LENGTH: 6 amino acids
269 (B) TYPE: amino acid
270 (D) TOPOLOGY: linear
271 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/165,546A

DATE: 05/04/2001
TIME: 17:31:26

Input Set : A:\Pto.amc
Output Set: N:\CRF3\05042001\I165546A.raw

273 Leu Leu Met Trp Ile Thr
274 5

VERIFICATION SUMMARY DATE: 05/04/2001
PATENT APPLICATION: US/09/165,546A TIME: 17:31:27

Input Set : A:\Pto.amc
Output Set: N:\CRF3\05042001\I165546A.raw

L:29 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:30 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:73 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:1
L:188 M:220 C: Keyword misspelled or invalid format, [(i) SEQUENCE CHARACTERISTICS:]

1644

RAW SEQUENCE LISTING DATE: 05/04/2001
PATENT APPLICATION: US/09/165,546A **TIME:** 16:23:47

DATE: 05/04/2001
TIME: 16:23:47

Input Set : A:\#711529v1 -LUD 5466.4 SEQUENCE LISTING.txt
Output Set: N:\CRF3\05042001\I165546A.raw

SEQUENCE LISTING

C--> 1 (1) GENERAL INFORMATION:

C--> 2 (i) APPLICANT: Knuth, Alexander; Jager, Elke; Chen, Yao,
3 Canlan, Matt; Gure, Ali, Old, Lloyd, Ritter, Gerd

C--> 5 (ii) TITLE OF INVENTION: ISOLATED PEPTIDES CORRESPONDING TO
6 AMINO ACID SEQUENCES OF NY-ESO-1, WHICH BIND TO
7 MHC CLASS I AND MHC CLASS II MOLECULES, AND
8 USES THEREOF

C--> 10 (iii) NUMBER OF SEQUENCES: 14

C--> 12 (iv) CORRESPONDENCE ADDRESS:
13 (A) ADDRESSEE: FULBRIGHT & JAWORSKI LLP
14 (B) STREET: 666 Fifth Avenue
15 (C) CITY: New York City
16 (D) STATE: New York
17 (E) COUNTRY: USA
18 (F) ZIP: 10158

C--> 20 (v) COMPUTER READABLE FORM:
21 (A) MEDIUM TYPE: Diskette, 3.5 inch, 144 kb storage
22 (B) COMPUTER: IBM
23 (C) OPERATING SYSTEM: PC-DOS
24 (D) SOFTWARE: WordPerfect

C--> 26 (vi) CURRENT APPLICATION DATA:
27 (A) APPLICATION NUMBER: US/09/165,546A
C--> 28 (B) FILING DATE: 02-Oct-1998
29 (C) CLASSIFICATION: 530

C--> 32 (vii) PRIOR APPLICATION DATA:
33 (A) APPLICATION NUMBER: 08/937,263 09/062,422
36 (B) FILING DATE: April 17, 1998
37 (A) APPLICATION NUMBER: 08/937,263
38 (B) FILING DATE: September 15, 1997
40 (A) APPLICATION NUMBER: US 08/752,182
41 (B) FILING DATE: 03-October-1996

C--> 43 (viii) ATTORNEY/AGENT INFORMATION:
44 (A) NAME: Hanson, Norman D.
45 (B) REGISTRATION NUMBER: 30,946
46 (C) REFERENCE/DOCKET NUMBER: LUD 5466.3

C--> 48 (ix) TELECOMMUNICATION INFORMATION:
49 (A) TELEPHONE: (212) 688-9200
50 (B) TELEFAX: (212) 838-3884

ERRORRED SEQUENCES

128 (2) INFORMATION FOR SEQ ID NO: 3:
129 (i) SEQUENCE CHARACTERISTICS:
130 (A) LENGTH: 32 base pairs
E--> 131 (B) TYPE: nuclear acid

purelic

RAW SEQUENCE LISTING DATE: 05/04/2001
PATENT APPLICATION: US/09/165,546A TIME: 16:23:47

Input Set : A:\#711529v1 -LUD 5466.4 SEQUENCE LISTING.txt
Output Set: N:\CRF3\05042001\I165546A.raw

132 (C) STRANDEDNESS: single
133 (D) TOPOLOGY: linear
134 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
136 CACACAAAGC TTGGCTTAGC GCCTCTGCC TG

32

VERIFICATION SUMMARY DATE: 05/04/2001
PATENT APPLICATION: US/09/165,546A TIME: 16:23:48

Input Set : A:\#711529v1 -LUD 5466.4 SEQUENCE LISTING.txt
Output Set: N:\CRF3\05042001\I165546A.raw

L:2 M:220 C: Keyword misspelled or invalid format, [(i) APPLICANT:]
L:27 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:28 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:64 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:68 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:71 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:1
L:72 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:76 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:80 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:84 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:88 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:92 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:96 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:100 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:104 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:108 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:130 M:241 E: Invalid Alpha Header Field, [TYPE:], SeqNo=3
L:186 M:220 C: Keyword misspelled or invalid format, [(i) SEQUENCE CHARACTERISTICS:]